

17589 U.S. PTO  
032904

Patent  
21711 U.S. PTO  
10/811597  
032904

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: PRASHER

Serial No.: Not yet assigned

Filing Date: Filed herewith

For: COOLING AN INTEGRATED CIRCUIT  
DIE WITH COOLANT FLOW IN A  
MICROCHANNEL AND A THIN FILM  
THERMOELECTRIC COOLING  
DEVICE IN THE MICROCHANNEL

Examiner: Not yet assigned

Group Art Unit: Not yet assigned

INTEL Docket No.: P18285

MS PATENT APPLICATION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

UTILITY PATENT APPLICATION TRANSMITTAL  
(Large Entity)

Sir:

Transmitted herewith for filing under 35 USC 111(a) and 37 CFR 1.53(b) is a new utility patent application for an invention entitled: **COOLING AN INTEGRATED CIRCUIT DIE WITH COOLANT FLOW IN A MICROCHANNEL AND A THIN FILM THERMOELECTRIC COOLING DEVICE IN THE MICROCHANNEL**

and invented by: **PRASHER**

Enclosed are:

1. ☒ Filing Fee as calculated and transmitted as described below
2. ☒ Specification having 15 pages and including the following:
  - a. ☒ Descriptive Title of the Invention

- b. ☐ Cross references to Related Applications (*if applicable*)
- c. ☐ Statement Regarding Federally-sponsored Research/Development
- d. ☐ Reference to Microfiche Appendix (*if applicable*)
- e. ☒ Background of the Invention
- f. ☐ Brief Summary of the Invention
- g. ☒ Brief Description of the Drawings (*if drawings filed*)
- h. ☒ Detailed Description
- i. ☒ Claim(s) as Classified Below
- j. ☒ Abstract of the Disclosure
- 3. ☒ Drawing(s) (*when necessary as prescribed by 35 USC 113*)
  - a. ☒ Formal          Number of Sheets 6
  - b. ☐ Informal          Number of Sheets
- 4. ☒ Oath or Declaration
  - a. ☒ Newly executed (*original or copy*)          ☐ Unexecuted
  - b. ☐ Copy from a prior application (37 CFR 1.63(d))
  - c. ☒ With Power of Attorney          ☐ Without Power of Attorney
  - d. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the Prior Application, see 37. CFR 1.63(d)(2) and 1.33(b).
- 5. ☐ Incorporation By Reference (*usable if Box 4b is checked*)  
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
- 6. ☒ Assignment Papers (*cover sheet & documents(s)*)
- 7. ☐ 37 CFR 3.73(B) Statement (*when there is an assignee*)
- 8. ☐ English Translation Document (*if applicable*)
- 9. ☐ Information Disclosure Statement/PTO-1449          ☐ Copies of IDS Citations
- 10. ☐ Preliminary Amendment
- 11. ☒ Acknowledgement Postcard
- 12. ☒ Mailed Via
  - ☐ First Class          ☒ Express Mail (*Specify Label No.*) **EL963890492US**
- 13. ☐ Certified Copy of Priority Document(s) (*if foreign priority is claimed*)
- 14. ☐ Request and Certification under 35 USC 122(b)(2)(B)(i) (*attach PTO/SB/35*)
- 15. ☒ Additional Enclosures: Credit Card Payment Form

**FEE CALCULATION**

For	No. Filed	No. Allowed	No. Extra	Rate	Fee
Total Claims	28	- 20	8	\$ 18.00	\$ 144.00
Indep. Claims	3	- 3	0	\$ 86.00	\$ 0.00
Multiple Dependent Claims (If applicable, please add \$ 290.00)					\$ 0.00
<b>BASIC FEE</b>					\$ 770.00
<b>OTHER FEE</b> (specify purpose):					\$ 0.00
<b>TOTAL FILING FEE</b>					<b>\$914.00</b>

Credit Card Authorizations for **\$914.00** and **\$40.00** are enclosed.

The Commissioner is hereby authorized to charge and credit Deposit Account No. 50-1852 as described below. A duplicate copy of this sheet is enclosed.

- ☒ Credit any overpayment.
- ☒ Charge any additional fees required under 37 CFR 1.16 and 1.17.

Respectfully submitted,



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March 29, 2004  
 Date